

SWBAT: differentiate between transverse and longitudinal waves

Jan 4-7:20 AM

Welcome!!!

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SECA Physics
Thursday 10 April 2014

- * Pick up:
 - blue concept sheet
 - worksheet
 - slip of paper (for later)



Opening Activity:

Read the "Commit and Toss" sheet and pick an answer

----> NO NAMES

Centering

Sep 7-7:04 AM

COMMIT & TOSS (white piece of paper):

Pick a choice on the sheet (circle it / write it)

→ No names ←

Crumple up the paper and toss it into the bucket

WHY MIGHT SOMEONE PICK
THAT?

Apr 12-7:13 AM

Let's do "The Wave"

<http://www.youtube.com/watch?v=3NxLh-3DdaE>

Vibrations through a medium

OBSERVATION:
VIBRATIONS TRAVEL THROUGH
A MEDIUM BUT DO NOT
TAKE THE MEDIUM WITH IT

New terms: transverse and longitudinal

Let's watch a simulation...



<https://phet.colorado.edu/en/simulation/wave-interference>

Apr 14-7:34 AM

Concept Sheet

~ 7 rows when we're done...

We'll fill in two terms (rows) today.

Concept	Meaning	Sym- bol	Units	Picture
FREQUENCY	HOW MANY PER UNIT OF TIME $\text{FREQ} = \frac{\#}{\text{TIME}}$	f $f = \frac{1}{T}$	hertz $\text{Hz} = \frac{1}{\text{sec}}$	
PERIOD	HOW MUCH TIME FOR ONE. $\text{PERIOD} = \frac{\text{TIME}}{\#}$	T $T = \frac{1}{f}$	Seconds sec.	
TRANSVERSE	WHEN THE MEDIUM VIBRATES ACROSS THE DIRECTION THE WAVE TRAVELS.			
LONGITUDINAL	WHEN THE MEDIUM VIBRATES ALONG THE DIRECTION THE WAVE TRAVELS			

Feb 18-6:50 AM

Common Misconception: We hear because air molecules move from mouth to ear

What evidence do we have that this is not how it works?

Slinky:

Simulator:

Sound:

- YOU CAN HEAR ME WITH MY BACK TURNED
- YOU DON'T FEEL A BREEZE
- YOU CAN MAKE NOISE BREATHING IN
- YOU CAN'T ALWAYS SMELL BREATH WHEN YOU HEAR

Apr 10-7:14 AM

Daily 3 Questions

CP: Write your own word problem; then
find frequency AND period.

- * Every day except test/project days
- * 3 Questions on the topics of the day
- * Main source of daily points
- * I am happy to give credit when I have no concerns about someone giving or getting help with the answers.

You can't get your points if you don't have your NAME!!!

Name	Period
1.	
2.	
3.	

Sep 9-7:32 AM

1) The physics name for a single (lone) vibration is

- A. pulse
- B. wave
- C. sound

2) When the medium vibrates along the direction the wave travels, it is called

- A. transverse
- B. longitudinal
- C. period

3) What is one reason we know air molecules don't travel from mouth to ear for us to hear?

- BACK TURNED
- BREEZE
- SMALL BREATH

Apr 12-7:15 AM